

Work Order ID 164529

Thursday, July 20, 2017 8:10:38 AM

164529

Page 1

Item ID: D3391-023 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Mid Tube Assembly
 Start Date: 7/20/2017 Start Qty: 1.00 *1* Cust Item ID:
 Required Date: 7/31/2017 Req'd Qty: 1.00 *1* Customer:
 Reference:

Approvals: Process Plan: DAS 21 Date: JUL 20 2017 Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3391	J

100

0.00

100

Skidtubes

Skidtubes

Skidtubes

Memo

1.24

1-Cut tube to finish length as per Dwg D3391

2-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391

3-Open aft saddles and GHW holes to Ø0.4375" except for fwd saddle holes

4-Remove .030" from Fwd indexing Ridge as per Dwg D3391

5-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391

6-Deburr, scribe batch # on aft end.

7- Locate D3391-021 in D3391-023 at 9.00" (see view F-F)

8- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149 locating from previously drill .188" dia hole, using t-pins and clicos to ensure perfect alignment, open up previously transfer drilled pilot holes in D3391-023/021 using drill press

ON FIRST SIDE ONLY drill out 2nd and forth saddle holes to 0.500" as per

ON 2ND SIDE ONLY ream out 2nd and forth saddle holes to 0.500" as per D3391-021 BATCH:

9- Drill #30 pilot holes using wearplate jig DT8149

3- Open Fwd Saddle holes per dwg

164529

17 07-26
D.T.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
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Revision ID: Stop ***NS2***
Item Name: Mid Tube Assembly
Start Date: 7/20/2017 Start Qty: 1.00 ***1*** Cust Item ID:
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Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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paint marker,

DO NOT DRILL HOLES #3-19-20 FROM FWD END OF JIG

~~Locating from two fwd wearplate holes in D3391-023 drill remaining 6 wearplate
holes in D3391-021 using DT8937~~

10- Open wearplate holes of D3391-023 assembly detail section G-G to

Ø0.375" (10 holes) as per Dwg D3391

Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.297"

(20 holes) as per Dwg D3391

Deburr and blow out all chips from inside tube, scribe batch # in D3391-023 at
aft end.~~11- Open 10 wearplate holes in D3391-021 to 0.297" dia~~

12- DEBURR AND BLOW OUT CHIPS

110

110

QC

Quality Control

QC5: Inspect part completeness to step on W/O

0.00

Memo

0.02

DAS
38
9-8

JUL 26 2017

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
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Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

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Quality Control

1 17-07-2020
97.

1 0 BE
17-07-26

DQA: _____ Date: _____

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Date : _____		Step #: _____		QTY Effective : _____			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
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Accept

N900040100Setup Start ***NS1***

Revision ID:

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Item Name: Mid Tube Assembly

Start Date: 7/20/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 7/31/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

0.00

140

Skidtubes

Skidtubes

Memo

0.53

1-Open float bag holes as per dwg
2-C'sink float bag holes as per dwg
3- Prepare tube for welding
4-Bond web in place as per Dwg D3391 & QSI 015.
Adhere for 12 hours)

A/R Sikaflex exp:

batch#:

NOTE:ENSURE WEB IS INSERTED IN AFT END OF TUBE

1 17-07-26
DT

150

QC5- Inspect part completeness to step on W/O

0.00

150

QC

Memo

0.02

Quality Control

BE
1 17-07-27

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160	Skidtubes								
Skidtubes	Memo	0.60							
Skidtubes	1-Weld crossbolt spacer as per dwg D3391 & QSI 004 2-grind weld flush								
170	QC10- Inspect visual per QSI004- ground welds	0.00							
170									
QC	Memo	0.02							
Quality Control									
180	QC5- Inspect part completeness to step on W/O	0.00							
180									
QC	Memo	0.02							
Quality Control									

1 0 BE 1707-27

DAS
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JUL 27 2017

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
185 *185* HandFinish Hand Finishing	Pressure Wash per QSI005 4.3 Memo AND REALODINE AS PER PAR09-043	0.00 0.40				(X) 0			201707/28 BEB
190 *190* SprayPaint Spray Painting	PRIME AS PER DWG AND QSI005 4.2.1.3.3 PRIMER BATCH: <u>137195</u> PAINT AS PER DWG AND QSI005 4.2.2.4 PAINT: <u>137852</u>	0.00 2.00				1			DAS 41 9-89 JUL 30 2017
200 *200* QC Quality Control	QC14- Inspect Spray Paint Memo	0.00 0.02				1			17/08/01 DAS 15 9-89

Work Order ID 164529

Thursday, July 20, 2017 8:10:38 AM

164529

Page 7

Item ID: D3391-023

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Mid Tube Assembly

Start Date: 7/20/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 7/31/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

230

230

HandFinish

HandFinishing

0.00

Hand Finishing

Memo

1-Install Inserts as per Dwg

0.60

1 1 1 12/08/01

240

240

QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

0.02

1 1 1 23
17-08-01

250

250

Packaging

Packaging

Identify as per dwg & Stock Location:

Memo

0.00

0.30

1 1 1 DAS
28
9-89 AUG 01 2017

Work Order ID 164529

Thursday, July 20, 2017 8:10:38 AM

164529

Page 8

Item ID: D3391-023 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Mid Tube Assembly
Start Date: 7/20/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 7/31/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260	QC21- Final Inspection - Work Order Release	0.00							
260									
QC	Memo	0.01							
Quality Control									

DAS
21
9-89 AUG 01 2017

DAS
21
9-89

AUG 01 2017

Picklist Print

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Page 1

Work Order ID: 164529

164529

Parent Item: D3391-023

D3391-023

Parent Item Name: Mid Tube Assembly

Start Date: 7/20/2017

Required Date: 7/31/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP A05.10.20New Issue KJ/EC
 IPP B06.02.10ECN773 dwg rev.D EC
 IPP C 07.03.20 rev F dwg EC
 IPP D 07.03.28 re-format EC
 IPP E 07.10.31 ecn 1053P EC
 IPP Rev:F ECN 1056 07-11-13 DD verified by: EC
 IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC
 IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC
 IPP Rev: I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP
 Rev:J add in seq 140 expire date &b# sikaflex DD 10.02.17 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-1-100		Manufactured	No			100	Each	18.0000	1	1			
D2500-1-100									**			17-07-28	
Skidtube Extrusion													
				<u>Location</u>				<u>Loc Qty</u>					
				HALL				18					
				133815				18					
D3591-1		Manufactured	No			230	Each	55.0000	2	2			
D3591-1									**				
Bushing													
				<u>Location</u>				<u>Loc Qty</u>					
				FG				10					
				115645				4					
				92873				6					
				FP001				45					
				109107				2					
				134643				9					
				141636				6					
				149167				3					
				153743				3					
				157205				1					
				157646				3					
				158739				18					
										2			

DAS
28
9-89

Picklist Print

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Page 2

Work Order ID: 164529

164529

Parent Item: D3391-023

D3391-023

Parent Item Name: Mid Tube Assembly

Start Date: 7/20/2017

Required Date: 7/31/2017

Start Qty: 1.00

Required Qty: 1.00

D3389-1

Manufactured No

140

Each

11.0000

1

1

D3389-1

Web

**

17-07-26
DT

Location

Loc Qty

Loc Code

LG002

11

154065

2

158256

5

158986

4

D3681-1

Manufactured No

160

Each

167.0000

5

5

D3681-1

Spacer

**

BE 170727

Location

Loc Qty

Loc Code

LG001

167

160402

167

ALS4-1032-130

AELS4-1032-130

Purchased

No

230

Each

6,088.000

20

20

AI S4-1032-130

Rivnut

**

11/10/2017

Location

Loc Qty

Loc Code

CCK004

5000

M137820

5000

FG

100

FG

M135442

50

M136579

50

FP001

855

M133077

3

M136579

852

st555

133

M136579

133

X20

Thursday, July 20, 2017 8:10:42 AM

Shop Packet Print

Page 2

D3391-041/-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

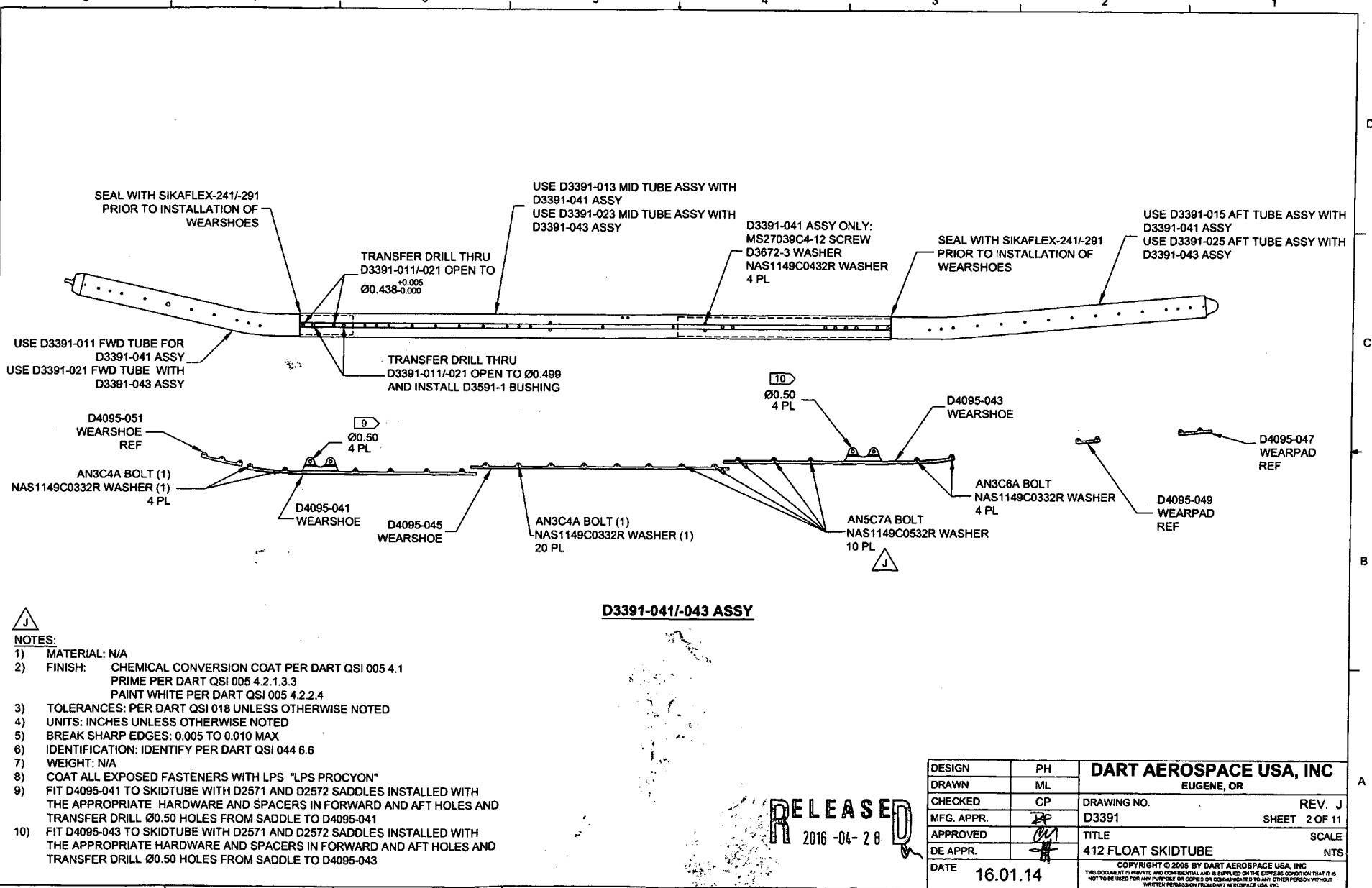
QTY -041	QTY -043	PART NUMBER	DESCRIPTION
X		D3391-041	FLOAT SKIDTUBE ASSEMBLY
	X	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1		D3391-011	FWD TUBE ASSEMBLY
1		D3391-013	MID TUBE ASSEMBLY
1		D3391-015	AFT TUBE ASSEMBLY
	1	D3391-021	FWD TUBE ASSEMBLY
	1	D3391-023	MID TUBE ASSEMBLY
	1	D3391-025	AFT TUBE ASSEMBLY
2	2	D3591-1	BUSHING
4		D3672-3	WASHER
1	1	D4095-041	WEARSHOE
1	1	D4095-043	WEARSHOE
1	1	D4095-045	WEARSHOE
1	1	D4095-047	WEARPAD
1	1	D4095-049	WEARPAD
1	1	D4095-051	WEARSHOE
24	24	AN3C4A	BOLT
4	4	AN3C6A	BOLT
10	10	AN5C7A	BOLT
28	28	NAS1149C0332R	WASHER
10	10	NAS1149C0332R	WASHER
4		MS27039C4-12	SCREW
4		NAS1149C0432R	WASHER



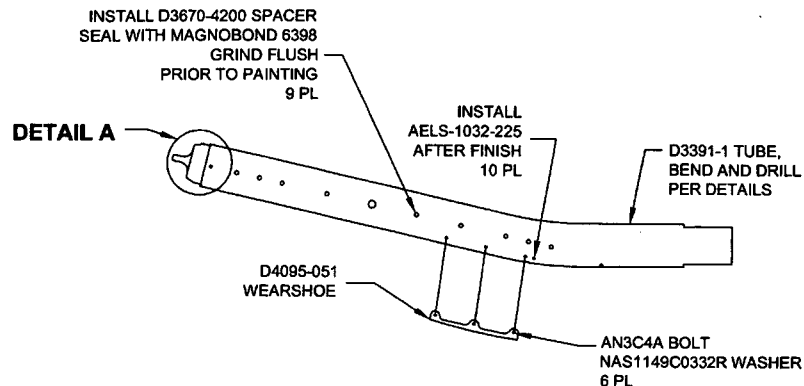
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 164529 MJS
170720

J	INCORPORATED DSI 9733, REFORMAT DRAWING CHANGED CBORE DEPTH (ZN D2-8, D2-9), REVISED TABLES, REPLACED POWDER COAT WITH PAINT	ML	16.01.14
I	REMOVE GASKETS AND REPLACE ALL WEARSHOES; PARTS LIST UPDATE, ZN A8-1, ZN A8-2, ZN A8-4, ZN B6-8; LPS-3 COATING REMOVED FROM NOTE 2, ZN A3-1, ZN A3-2, REMOVED INSERT AELS-1032-130, ZN B6-4, B2-4, C7-8, C3-8; REMOVED HOLES, ZN D6-4 ZN D2-4, ZN D7-8, ZN D3-8	XDF	11.10.13
H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING, ZN C6 Ø0.438 DIM WAS 4 PL, ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING, ZN C6 Ø0.438 DIM WAS 4 PL, ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC EUGENE, OR	
DRAWN	ML		
CHECKED	CP	DRAWING NO.	REV. J
MFG. APPR.	PH	D3391	SHEET 1 OF 11
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	412 FLOAT SKIDTUBE	NTS
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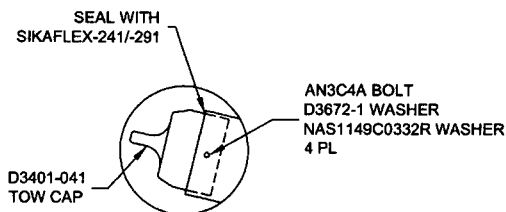
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2016-04-28
EON 16-96



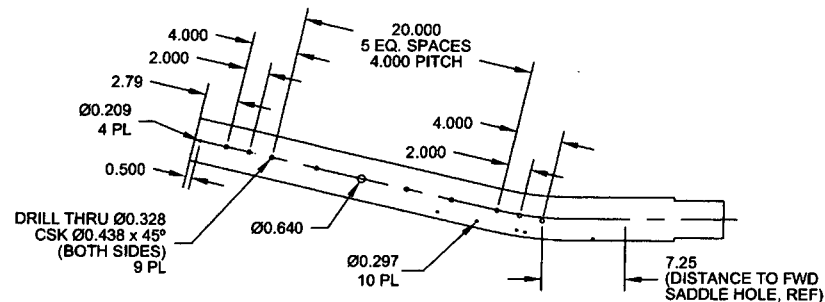
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CHECKED	CP	DRAWING NO.	REV. J
MFG. APPR.	<i>[Signature]</i>	D3391	SHEET 2 OF 11
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	412 FLOAT SKIDTUBE	NTS
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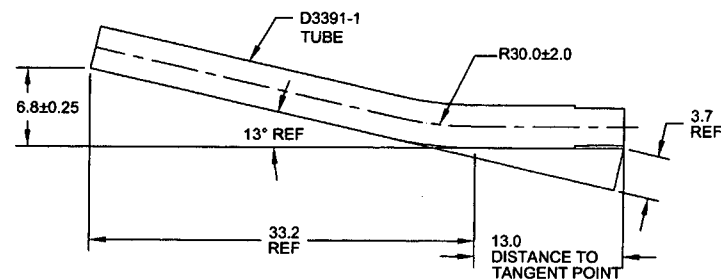
D3391-011 FWD TUBE ASSEMBLY
ASSEMBLY DETAIL



DETAIL A
SCALE 2X



D3391-011 DRILLING DETAIL



D3391-011 BENDING DETAIL
(MAKE FROM D3391-1)

D3391-011 FWD TUBE ASSEMBLY PARTS LIST

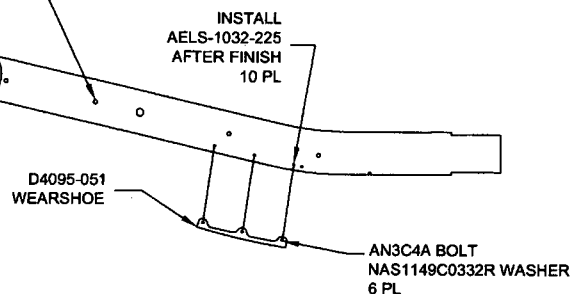
QTY -011	PART NUMBER	DESCRIPTION
X	D3391-011	FWD TUBE ASSEMBLY
1	D3391-1	TUBE
1	D3401-041	TOW CAP
9	D3670-4200	SPACER
4	D3672-1	WASHER
1	D4095-051	WEARSHOE
10	AELS-1032-225	INSERT
10	AN3C4A	BOLT
10	NAS1149C0332R	WASHER

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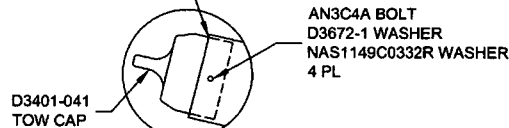
INSTALL D3670-4200 SPACER
SEAL WITH MAGNOBOND 6398
GRIND FLUSH
PRIOR TO PAINTING
4 PL

DETAIL B



D3391-021 FWD TUBE ASSEMBLY
ASSEMBLY DETAIL

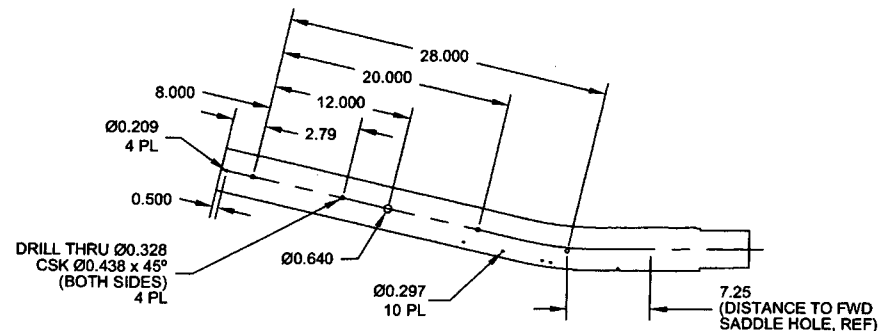
SEAL WITH
SIKAFLEX-241/-291



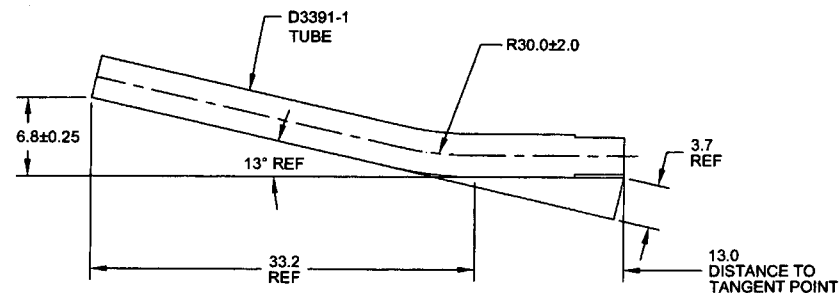
DETAIL B
SCALE 2X

D3391-021 FWD TUBE ASSEMBLY PARTS LIST

QTY -021	PART NUMBER	DESCRIPTION
X	D3391-021	FWD TUBE ASSEMBLY
1	D3391-1	TUBE
1	D3401-041	TOW CAP
4	D3670-4200	SPACER
4	D3672-1	WASHER
1	D4095-051	WEARSHOE
10	AELS-1032-225	INSERT
10	AN3C4A	BOLT
10	NAS1149C0332R	WASHER



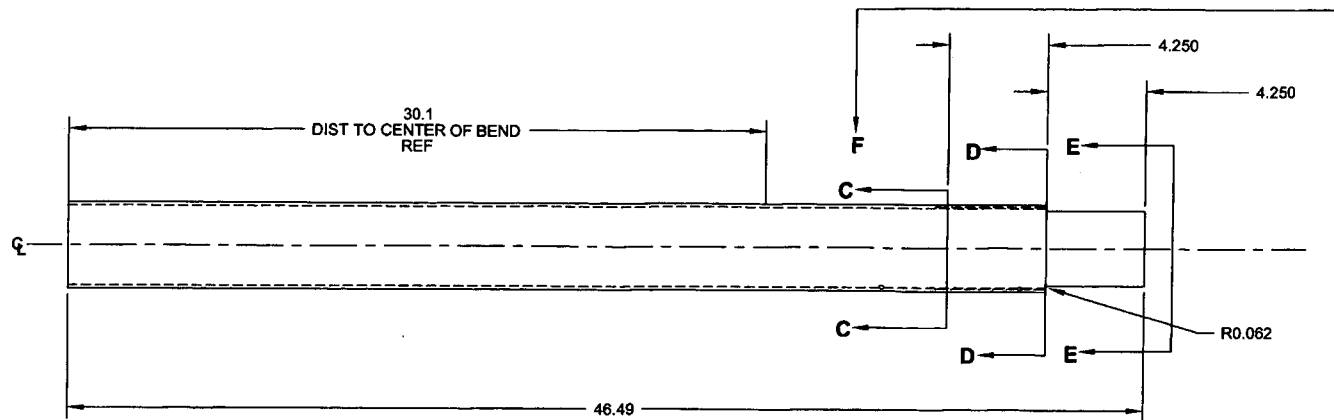
D3391-021 DRILLING DETAIL



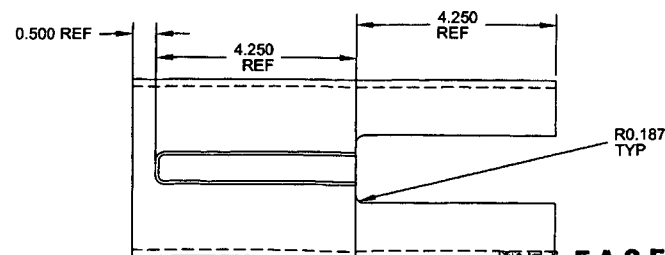
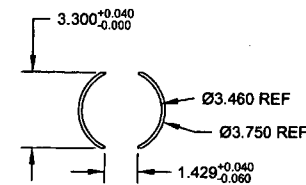
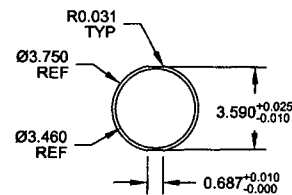
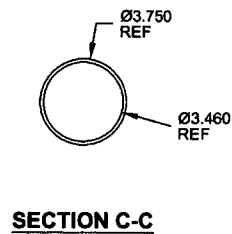
D3391-021 BENDING DETAIL
(MAKE FROM D3391-1)

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DE APPR.	DP	412 FLOAT SKIDTUBE	NTS
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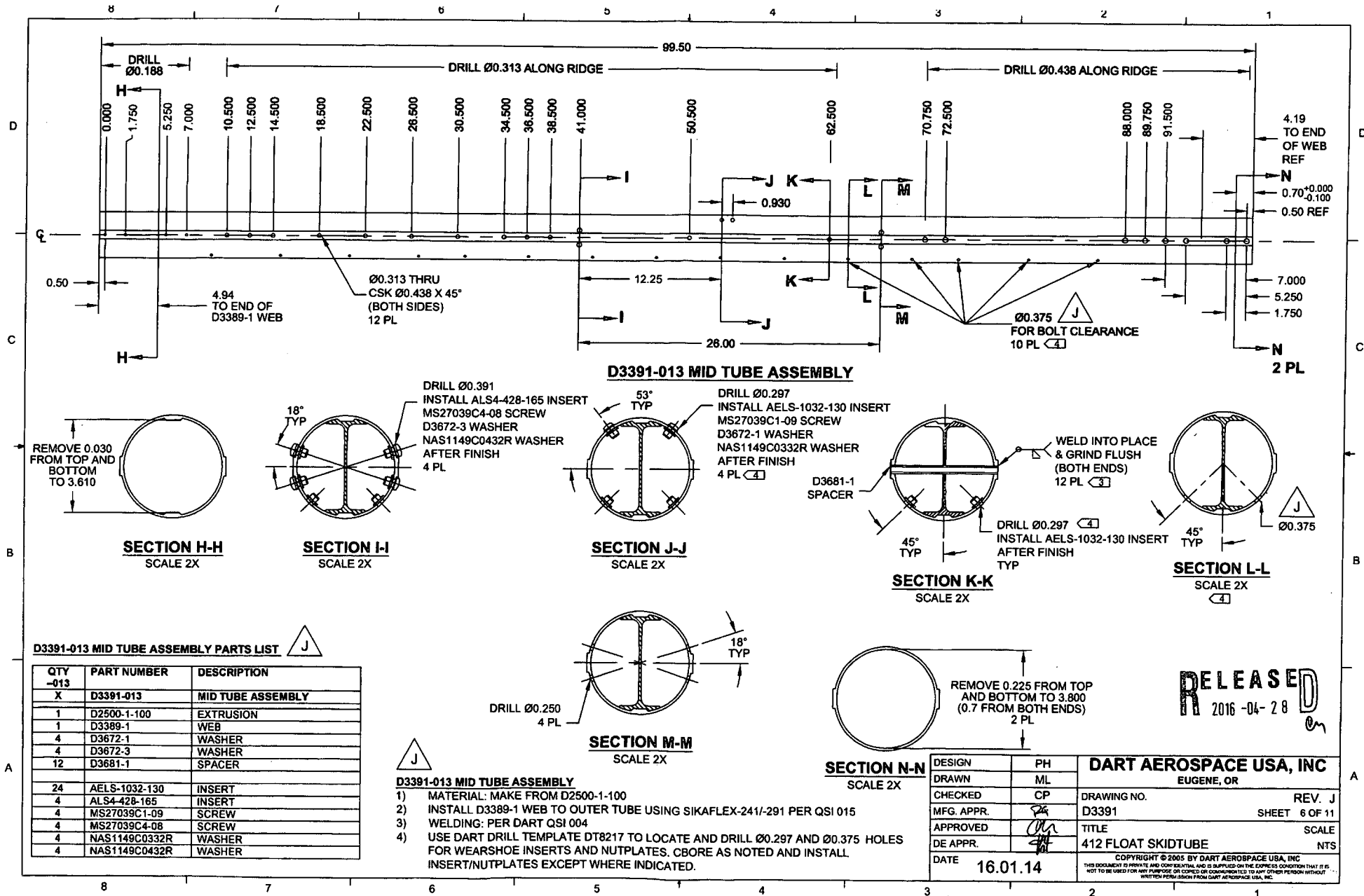


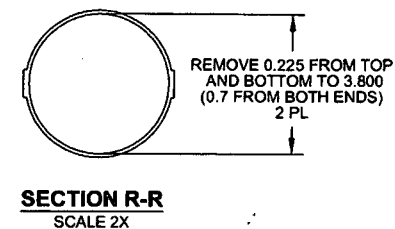
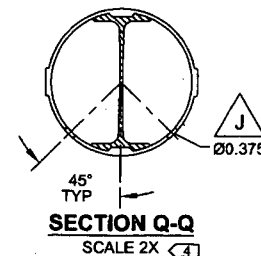
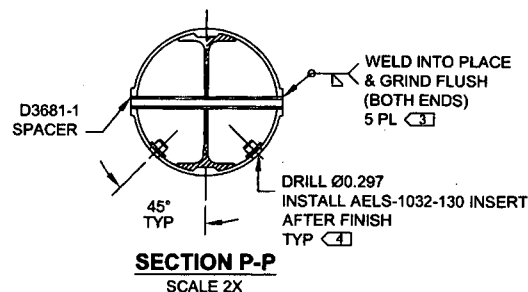
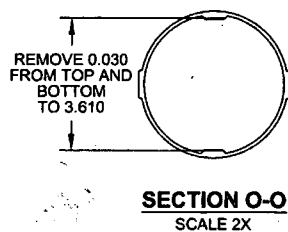
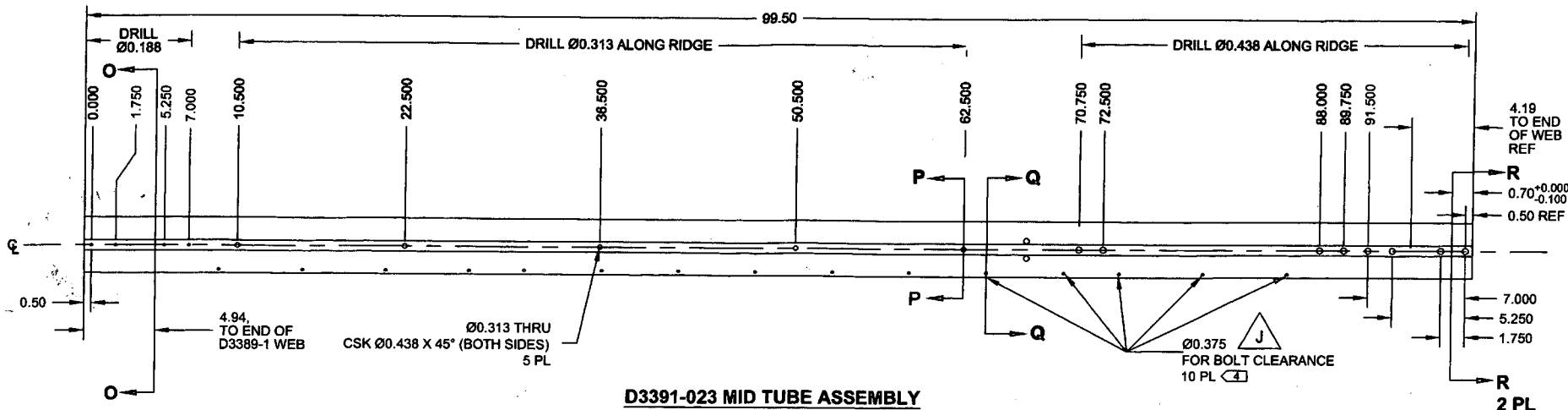
D3391-1 TUBE
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



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APPROVED	<i>CP</i>	TITLE	SCALE
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D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
-023		
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

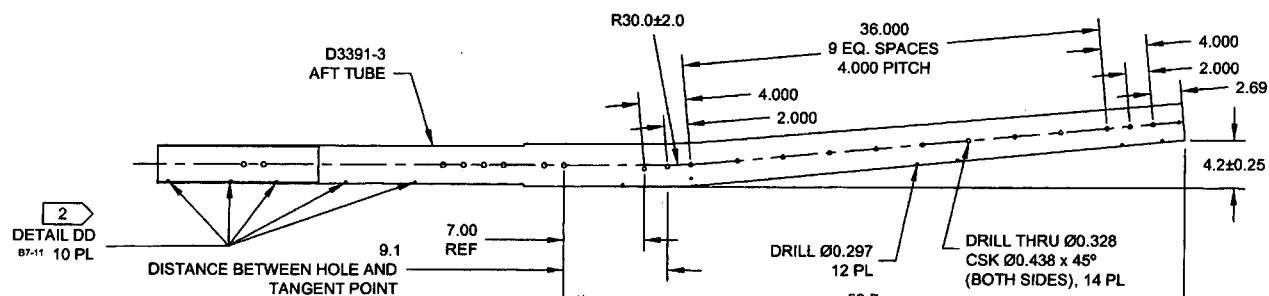
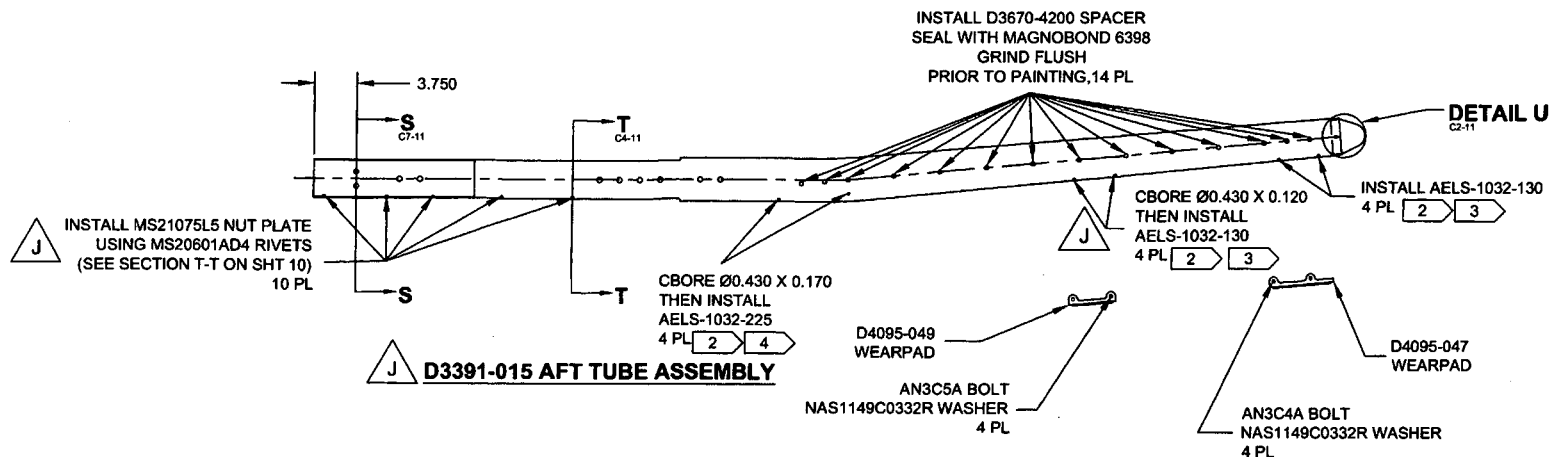


D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
- 3) WELDING: PER DART QSI 004
- 4) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 AND Ø0.375 HOLES FOR WEARSHOE INSERTS AND NUTPLATES. CBORE AS NOTED AND INSTALL INSERT/NUTPLATES EXCEPT WHERE INDICATED.

DESIGN	PH	DART AEROSPACE USA, INC	
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CHECKED	CP	DRAWING NO. D3391	REV. J
MFG. APPR.			SHEET 7 OF 11
APPROVED		TITLE 412 FLOAT SKIDTUBE	SCALE NTS
DE APPR.			
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2016-04-28



D3391-015 AFT TUBE ASSEMBLY PARTS LIST

QTY -015	PART NUMBER	DESCRIPTION
X	D3391-015	AFT TUBE ASSEMBLY
1	D2648	AFT CAP
1	D3391-3	AFT TUBE
14	D3670-4200	SPACER
2	D3672-1	WASHER
1	D4095-049	WEARPAD
1	D4095-047	WEARPAD
8	AELS-1032-130	INSERT
4	AELS-1032-225	INSERT
4	ALS4-428-165	INSERT
6	AN3C4A	BOLT
4	AN3C5A	BOLT
20	MS20601AD4	RIVET, BLIND
10	MS21075L5	NUT PLATE, FLOATING
10	NAS1149C0332R	WASHER

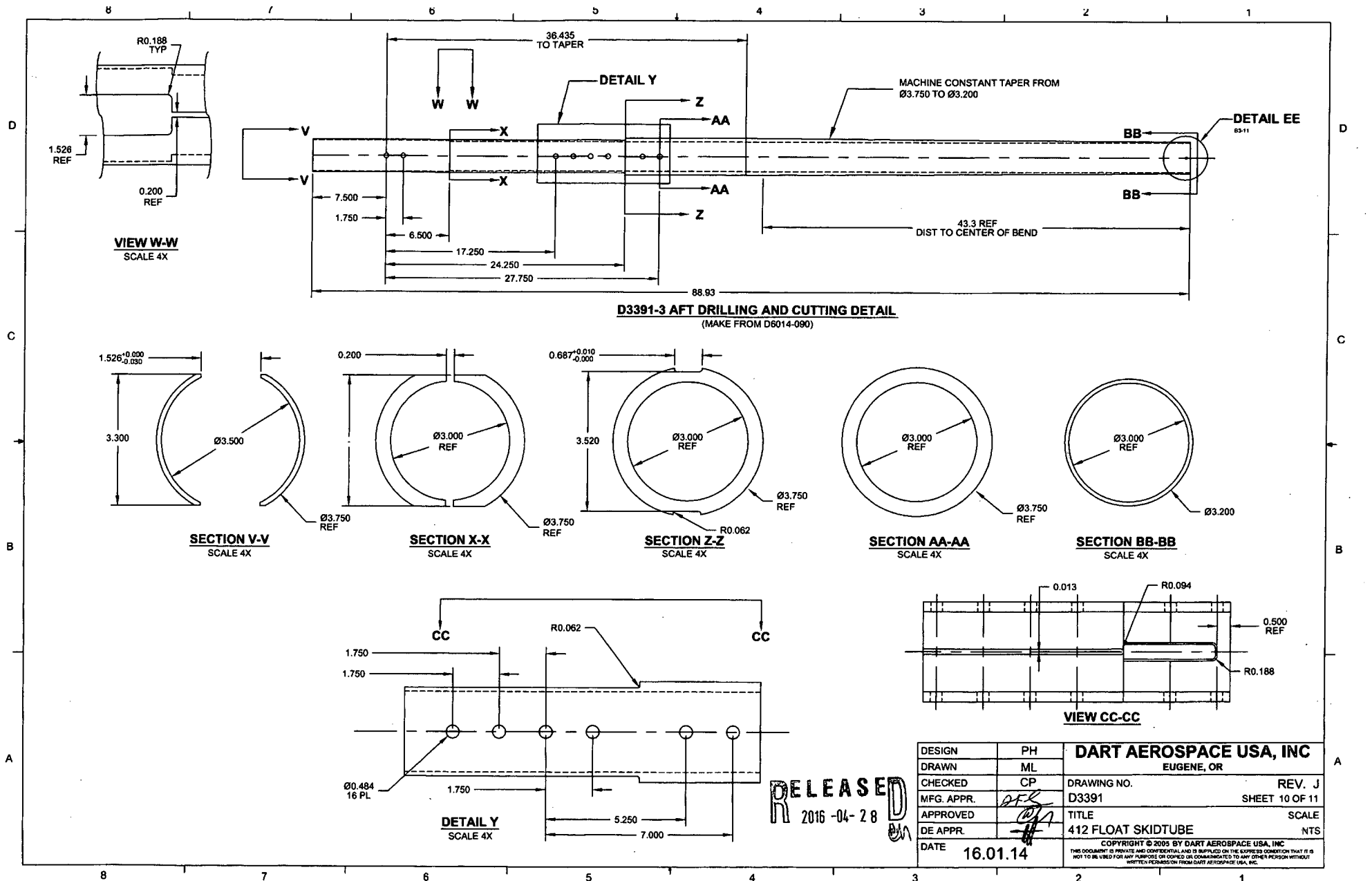
NOTES:

- 1) COAT ALL EXPOSED FASTENERS WITH LPS "LPS PROCYON"
- 2) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 AND Ø0.375 HOLES FOR WEARSHOE INSERTS AND NUTPLATES. CBORE AS NOTED AND INSTALL INSERT/NUTPLATES EXCEPT WHERE INDICATED.
- 3) ENSURE WALL THICKNESS IS BETWEEN 0.070 AND 0.130 BEFORE INSTALLING INSERT
- 4) ENSURE WALL THICKNESS IS BETWEEN 0.130 AND 0.225 BEFORE INSTALLING INSERT

BENDING AND DRILLING DETAIL

RELEASED
2016-04-28

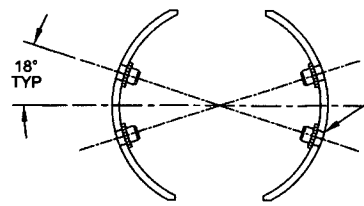
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	ML	EUGENE, OR	
CHECKED	CP	DRAWING NO.	REV. J
MFG. APPR.	<i>CP</i>	D3391	SHEET 8 OF 11
APPROVED	<i>CP</i>	TITLE	SCALE
DE APPR.	<i>#</i>	412 FLOAT SKIDTUBE	NTS
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2016-04-28

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DRAWN	ML	EUGENE, OR	
CHECKED	CP	DRAWING NO. D3391	REV. J
MFG. APPR.	DE APPR.	TITLE 412 FLOAT SKIDTUBE	SHEET 10 OF 11
DATE	16.01.14	SCALE NTS	

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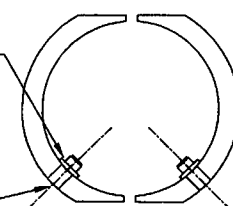


SECTION S-S
SCALE 5X

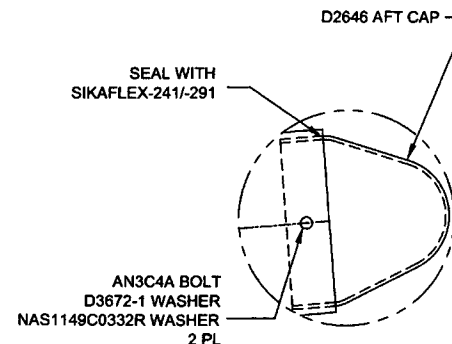
DRILL Ø0.391
CBORE Ø0.516 X 0.040 DEEP
INSTALL ALS4-428-165 INSERT
4 PL

USE DT8217 DRILL TEMPLATE
TO LOCATE HOLES AND OPEN
TO Ø0.375

MS21075L5 NUTPLATE
REF



SECTION T-T
SCALE 5X
5 PL

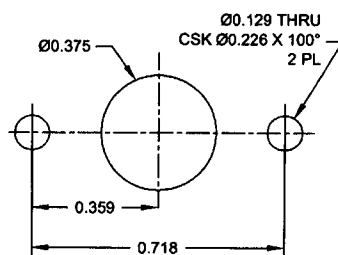


DETAIL U
SCALE 5X

SEAL WITH
SIKAFLEX-241/-291

AN3C4A BOLT
D3672-1 WASHER
NAS1149C0332R WASHER
2 PL

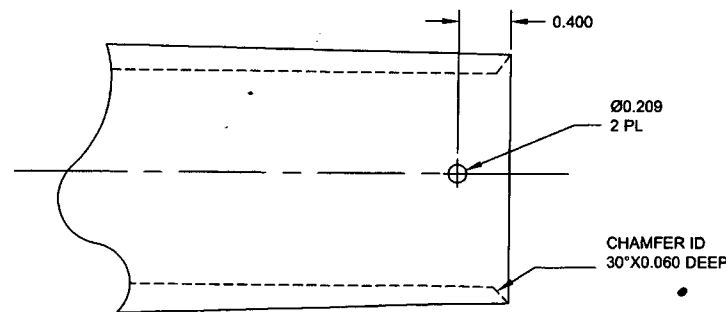
D2646 AFT CAP



DRILLING DETAIL DD
SCALE 10X



1



DETAIL EE
SCALE 2X



NOTES:
1) USE INDUSTRY STANDARD NUT PLATE DRILL JIG IF REQUIRED.

RELEASED
2016-04-28

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	ML	EUGENE, OR	
CHECKED	CP	DRAWING NO.	REV. J
MFG. APPR.		D3391	SHEET 11 OF 11
APPROVED		TITLE	SCALE
DE APPR.		AFT TUBE ASSEMBLY	NTS
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